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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/596,382	06/16/2000	Sailesh Chittipeddi	79	2888

7590 05/08/2002

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EXAMINER

TSAI, H JEY

ART UNIT	PAPER NUMBER
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2812

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant No.

09/596,382

Applicant(s)

CHITTIPEDDI, SAILESH

Examiner

H. Jey Tsai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 13-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: _____

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Election/Restriction

Applicant's election of claims 1-12 in Paper No. 7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. 6,251,740 or Lin 6,303,423 in view of Gambino et al. 6,025,226, cited by applicant.

The reference(s) teach the features :

Johnson et al. discloses a method of forming an integrated circuit, which includes :

forming an opening 70 or 94 in a layer 40 for interconnect structure (dual damascene structure), figs. 1+, or 17+,

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forming at least two openings 70 or 92 in the layer 40 for a capacitor,

forming a etch stop layer 216.

Lin a method of forming an integrated circuit, which includes :

forming an opening 20 in layers 18, 20 for interconnect structure (dual damascene structure), figs. 2+, 5a+, 6a+,

forming at least two openings 36, 38 in the layer 18, 20 for a capacitor.

Gambino teaches a method of forming an integrated circuit, which includes :

forming an opening 330 in layer 307 for interconnect structure which is damascene process/structure, figs. 4+ and col. 3, lines 43+,

forming at least two opening one is opening 320 one is (not shown) to connect to the metal layer 310 (see col. 7, lines 50+),

forming a via and trench 332 having a different width from opening 330 in fig. 7.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have recognized that Johnson and Lin's interconnect structure is a damascene

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structure as known in the art and is taught by Gambino et al.
and also a trench and/or via with difference width can be formed
on top of the opening to increase the current capacity.

Any inquiry of a general nature or clerical matters or
relating to the status of this application or proceeding should
be directed to the Group customer service whose telephone number
is (703) 306-3329 and Fax number (703) 306-5515. Group
receptionist telephone number 703-308-0956.

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to H. Jey
Tsai whose telephone number is (703) 308-1374. The examiner can
normally be reached on from 7:00 Am to 4:00 Pm., Monday thru
Friday.

If attempts to reach the examiner by telephone are
unsuccessful, the examiner's supervisor, John Niebling can be
reached on (703) 308-3325. The fax phone number for this Group
is (703) 308-7722.

hjt

5/2/02



H. Jey Tsai
Primary Examiner
Patent Examining Group 2800